

~USSN: 10/720,617  
Atty. Docket No.: 2003B125  
Reply to Office Action dated June 13, 2005  
Amendment dated August 15, 2005

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### REMARKS/ARGUMENTS

#### *Election/Restrictions*

Claims 22-30 have been withdrawn as a non-elected process. Claims 1-21 and new claim 31 remain in the application.

#### *Withdrawn Objections and Rejections*

The objection to page 1 was withdrawn in view of the provided serial numbers and the provisional obviousness-type double patenting rejection was withdrawn in view of the submitted Terminal Disclaimer.

#### *35 USC 103(a) Rejection of Claims 1-16 and 18-21 over Moser et al. US Patent No. 6,514,904 ("Moser")*

These claims were again rejected because Moser teaches an alumina catalyst with a platinum group component (e.g., rhodium) and indium thereon, including the preparation techniques and reduction steps. It was noted that Moser doesn't teach the exact ranges for rhodium and indium. Applicants respectfully traverse the rejection with respect to the amended claims and new claim 31.

#### Moser

Moser teaches a preferred class of shaped alumina catalysts on which any of five (Pt group, group 14, modifiers, alkaline, halogen adjustment, and presulfiding) optional components may be added. From the first claim of Moser and the general description, it is clear that Moser was not teaching only a new support, not a specific combination of rhodium and indium, even though the optional ranges overlap the claims. No specific combination of metals is taught.

Claim 1 is amended to emphasize the particular components of the invention and to be consistent with the teachings of the specification that only certain metals and ranges are effective for the intended purpose of this catalyst. There is no reasonable interpretation to conclude that Moser teaches a catalyst consisting essentially of the claimed ranges of rhodium and indium,

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especially without adding any of the other optional components. Reconsideration and withdrawal of the rejection are respectfully requested.

**35 USC 103(a) Rejection of Claims 1-15 and 17-21 over Robinson et al. US Patent No. 4,522,935 ("Robinson")**

These claims were again rejected because Robinson shows a platinum group component and indium in a reverse relationship but in overlapping ranges on supports. Applicants respectfully traverse the rejection with respect to the amended claims and new claim 31.

Robinson

Robinson teaches a catalyst with at least four non-optional components as taught in the disclosure and claimed. One of those components is a halogen.

The Claimed Invention

The examples of the specification demonstrate the selective requirements of the invention process in that certain applications of metals do not work well, certain supports are relatively ineffective, and too much metal or other metals are ineffective or disruptive. Accordingly, the amended claims define the effective catalysts.

Claim 1 has been amended to provide that the catalyst consists essentially of the defined ranges of indium and rhodium.

Claim 10 is amended consistent with the distinctions shown in the specification Examples of Tables 4, 5, and 6. That is, rhodium deposited from a nitrate is effective; indium deposited from a nitrate or a formate is effective; and alumina, zirconia, and ceria-alumina are effective in conversion of acetylene, selectivity of ethylene, and reduction of green oil.

New claim 31 defines the invention supported catalyst with the preferred ranges of rhodium and indium and the selected supports. Reconsideration and withdrawal of the rejection are respectfully requested.

A notice of allowance is respectfully solicited.

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